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## (54) CELLULOSIC GEL FILTRATION FILLER AND MANUFACTURE THEREOF

### (57)Abstract:

**PURPOSE:** To provide a filler suitable for separating a mixture of proteins and water soluble macromolecules at a high speed and a method of manufacture thereof.

**CONSTITUTION:** A filler comprises spherical particles of average size less than 50 $\mu$ m, consisting of a II type cellulose crystal phase and a cellulose noncrystal phase, with cellulose molecular chains crosslinked in the noncrystal phase. The exclusion limit molecular weight of the filler is 30, 000 to 150, 000. When the filler is used to fill a column, the number of theoretical stages is 1200 or more when the flow rate is 1.0ml/min. Micro noncrosslinked cellulose particles whose exclusion limit molecular weight is in the range 5, 000 to 30, 000 are subjected to a first cross-linking reaction in an aqueous medium containing basic compounds. The cross-linked cellulose particles obtained are subjected to a second cross-linking reaction in a hydrophilic protic organic solvent containing a basic compound.

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